WITK

The Spark Gap

November 1987

Book XII Volume XI

Official Journal of the Wellesley Amateur Radio Society

President's Message

by Tom Kinahan, N1CPE

We've got a few interesting tasks facing us in the next few months.

First, we've got to get a few people together and decide the next step in opening the repeater telephone line up for outgoing emergency calls. With the winter season coming up, we really need this soon, let aside the questions we received lately about when it will be back on. This along with the fact that our touch tone friend still shows up now and then. By the way, the best thing to do if you hear some station attempting to access the repeater in a non authorized fashion, is to not acknowledge it on the air and take a note as to when it happened and forward it to the repeater committee OFF THE AIR.

The Bicentennial of the U.S. Constitution WAS is coming up. Starting in December, you will be able to work stations with a 200 in their call and if you work one in each state in the union, you qualify for the Bicentennial WAS which is available without confirmation (you don't have to wait for QSLs). As for our plans for the Constitution Bicentennial, we are working on a location within the city limits of Boston as a station location. We also have a request in for an alternate location in Wellesley should the politics fall through. For those not acquainted with what this means, club stations, in their own region, may pre-register to replace the digit in their call with a 200 for one week in the coming year starting in December. The weeks are as defined in the September 1987 QST in an article on the subject. This week falls in most cases near the date that each state either ratified the Constitution or became part of the union.

Also this month is November Sweepstakes. The club station will be available for both the CW and phone weekends. If you are participating from your own station, please let it be known so that we can enter the Affiliated Club Competition.

Wellesley Veterans Parade

The Wellesley Veterans Parade on Sunday October 18th went quite well. W.A.R.S. 2 meter operators helped relay messages necessary for the staging of the parade along Washington St. and down Elm, Croton, and Woodlawn Streets. W.A.R.S. operators also communicated to the reviewing stand where various town officials were located. The weather and the parade couldn't have gone smoother. In all, approximately 70 units were lined up and marched the parade in the 70 degree sunny day. Thanks to everyone that helped, Ian MacLennon (AF1R), Rita Baker (N1DDI), Vern (ND1Z) Liz (KA1PNA) and Sara Valero, Neil Grossman (KA1PPG), C.J. McDonald (WB1BUM), Tom Kinahan (N1CPE).

Museum of Science

The Boston Museum of Science Amateur Radio Exhibit has come and gone, but we'll remember it for some time. The event was an overwhelming success. Displays of Amateur Television, Packet, HF operations, CW training, SWL listening, and Message handling, Satellites and General information were well received. We had more room than last year to spread out and show our hobby. Initial impressions were that there were more interested people at this year's exhibit but there were probably fewer people at the museum.

MEETINGS THIS MONTH:

November 5, 1987 at 7:30 P.M.
November 19, 1987 at 7:30 P.M.
211 Washington St., Wellesley

The packet stations were set up in on 'H' in the middle of the floor to attract some attention (it worked) and also to get more operating setups. In all there were 7 operating packet stations set up. Most of them were on 2 meters one digipeater/gateway node from 2m to 220, and some HF packet operations. Parents were able to let their kids sit down and talk to a ham on packet and then were conveniently taken aside by other exhibitors to get an explanation of the virtues of ham radio or packet in particular.

The ATV was a big hit as expected. Somehow, being able to talk to and see the person that you are talking to really hits you. People were captivated by the ATV exhibit, and we're not just talking visitors to the museum, many hams were also interested even though they've seen it a hundred times at hamfests.

The Message center went quite well. In the count of total packet stations above, the message center had 2 of those stations, on 2 meters. We managed to take 180 messages from the visitors and transmit them all successfully from the museum. The packet stations we had were low power walkies that in all cases were talking to a packet bulletin board system that was located in the museum. Basically, each message was typed up when taken and transmitted to the bbs across the room in the packet booth. Then, at the end of the day, that bbs forwarded that traffic to K1UGM in Wakefield where it was sent far and wide. In addition to the 'through' traffic that went to K1UGM we had local traffic for the Boston area, most of which was sent via 2 meter voice. We took messages in at least 2 languages, W1CE's French being enough to take a message from a native of Montreal. This message was sent via packet so that the next person to have to pass the message is likely to be in Montreal and a person who speaks French. Roughly half of all message were through messages, that is messages destined for other than Eastern Mass. There were messages for some countries in South America, and one to Guam!

All in all a good time was had by all. By the way, if you're ever in the area of the Museum, be sure to check out the Omni Theater.

Thanks to Dave Mitchell (N7FAN), Bob Gettys (N1BRM), Neil Grossman (KA1PPG), Dave Kent (N2AWG), C.J. McDonald (WB1BUM), Kevin Kelly (WA1YHV), Bob Weinstock (KN1K), Paul Monroe (KA1LDV), Bill Knowles (KA1QWE/AG), Luck Hurder (KY1T), John Antes (KB1EB)... for helping put in the message center. Thanks also to Lew Scott (W1CE) and Jim Morris (K1UGM) for their tremendous assistance in the logistics and at the museum. And also to Jim Hatherley (WA1TBY), Mary (K1ABO), KA1NOI, Don Haney (KA1T) and all the traffic handlers of Eastern Massachusetts for their tremendous support in this exhibit.

For Sale

A good home is needed for : Kenwood TS-430s w/200Hz filter, FM module for 10m, Kenwood Power Supply together for $700.

Radio Shack Model 100 Laptop computer w/cassette recorder and carrying case. Also - Radio Shack DMP105 Dot Matrix Printer.

Also More stuff to unload!! Talk To Me!!

Jim Charboneau, KC1BB - 146.04/64, 147.63/03, 879-4995 - Work. Will not discuss prices on the air.

Two Meter Trivia Net

Attention trivia fans! There is a trivia net on two meters every Sunday on the Fall River 147.075 (+ 600 Khz offset) repeater. Check-In is at 7:30 PM (local time). The Net Control Station (NCS) asks all the questions and keeps score. In rotation, each station is asked to choose from a limited number of categories. The NCS then asks a question from the category. If the answer is correct, then the station receives a point.

Calendar ! ! !

- November 5 : W.A.R.S. Meeting ... 7:30 P.M. ... Wellesley Red Cross.
- November 7-8 : November SS, CW.
- November 19 : W.A.R.S. Meeting ... 7:30 P.M. ... Guest speaker, Paul Roemer, KG6LC on Satellites !!!
- November 21-22 : November SS, Phone.
- November 28-29 : CQWW, CW.

The Spark Gap

Official Journal of the Wellesley Amateur Radio Society

Editor :

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Lowell, Ma. 01854

The Spark Gap is a monthly publication of the Wellesley Amateur Radio Society, its sole purpose is to keep its members abreast of current happenings, FCC rule & regulation changes and to list equipment offered for sale or trade by members. Members are encouraged to contribute to the Spark Gap and may send their articles to the Editor's address or to the club address. Items printed in the Spark Gap may be reprinted by other Amateur Radio publications provided the author and the Spark Gap are given credit.

The Wellesley Amateur Radio Society is dedicated to the promotion of Amateur Radio through instruction, fellowship, demonstration and participation. Annual membership in the society is $15 and the club year runs from September 1 through August 31. Amateur Novice through Advanced classes are conducted regularly at no cost. To enroll in a class or gain information about the Society in general, write :

The Wellesley Amateur Radio Society
211 Washington Street
Wellesley, Ma. 02181

If the answer is incorrect, then then next station in rotation may answer it or choose a new question. This action proceeds (with regular pauses for emergency repeater traffic) for a number of cycles.

The 147.075 repeater is located about 50 miles southwest of Boston. Its antenna is atop a 15 story high-rise building on the east side of Fall River and its power output is sizeable. Many folks from our area should be able to work the repeater with a roof antenna and 25 watts.

Dues are Due!

If you haven't already paid your dues please remit $15 for membership plus $2 for each additional family member, or for non-sighted persons not wishing to receive the newsletter, $2. Please use the form at the back of this newsletter when renewing. We are specifically interested in license classes that may have changed, whether or not you are an ARRL member, and your phone number. Send your dues to the club address, 211 Washington St. Wellesley, Ma. 02181. For all persons that renew before the last day of November, we will enter their name in the membership drawing to be held at the first meeting of December.

Raffle

If you renew your membership before the last day of November, you are automatically entered once in our membership raffle. Items in the raffle include ARRL repeater directories, Books from the ARRL bookshelf, and a Cantenna 1 Kw Dummy Load from Heathkit. These items total $40 retail. If you desire additional tickets they are available 3 for $1 at any club meeting until then.

Our thanks go to Heathkit on Rt 9 in Wellesley for the donation of some of the prizes.

Net!

Don't forget the W.A.R.S. net on the Wellesley 2 meter repeater, 147.03 MHz, at 8:00 P.M. EST every Wednesday night.

Renewing your ARRL Membership

If you're renewing your ARRL membership, please send your completed ARRL membership form (check QST) and your check made out to the Wellesley A.R.S.. Send the check and form to the club at 211 Washington St. Wellesley, Ma. 02181. We will then forward this to the ARRL on your behalf. This way, we are able to make $2 from each renewal.

OFFICERS

President
Tom Kinahan, N1CPE, 898-2749
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Operations Chairman
Vern Valero, ND1Z, 533-6822

Welcome to Ten Meters

By Bruce Frederick, KA1FGY, 10-10 #41745

Ten meters is an unusual band: technically, it is considered an HF band, but it often exhibits the characteristics and propagation of low VHF.

It is the only HF amateur band where you can find FM, repeaters, and satellites, and it even offers a beacon segment where worldwide, low-power beacons give you an instant snap-shot of current propagation conditions.

Combine this with increased activity due to Novice Enhancement, and constantly improving sunspots which allow worldwide QRP contacts, and you've got a band that is ready to explode.

Yet many people dismiss 10 meters as a barren desert — understandable, if you've ever gone up there when the band wasn't open. (Just ask Vern, ND1Z. He's still hoarse from calling unanswered CQ's while operating last month's disappointing 10 Meter Special Events station. The band was DEAD. The next day, South America was rolling in with S9 signals.)

If you haven't given 10 meters a try yet, check it out every once in a while. You may be surprised at the activity you hear.

10-10 Numbers

This is one of the odder aspects of 10 Meters. If you have only worked 10 Meters occasionally, you may know that there is such a thing as a "10-10" number, but not really understand what it is. It sometimes seems like everybody who works 10 Meters has one of these numbers, and trades it as easily during a QSO as their callsign and QTH.

If you are new to 10 Meters, it can be disconcerting to be asked for something that you've never even heard of. Here's a brief explanation of what 10-10 numbers are.

Back in the early 1960's, Citizen's Band (11 Meters) was new and growing, and 10 Meter amateur activity was languishing. A move was mounted to reallocate this "unused" ham spectrum to the CBers, who supposedly would make better use of the frequencies (sound familiar?). In response, a 10 Meter net was started in California to encourage more activity on the band. To add some interest, members of the net were assigned membership numbers, which people started to collect and trade like baseball cards. This local net (which still meets a couple of times a week) evolved into the 10-10 International Net, Inc.

This organization assigns the 10-10 numbers that you hear traded over the air, and it also charters local 10-10 nets, three of which exist in this area of New England. Each of these chapters assign their own, local membership numbers, which some avid paper chasers also collect.

Some 10 Meter hams (probably most) take a fairly casual attitude towards collecting and giving out 10-10 numbers: it provides a little more to talk about beyond the usual rig/antenna/weather QSO, and it's fun to give out a number to a collector who really needs your state. Other hams take this paper-chasing so seriously that it's difficult to understand when they have time to eat, sleep, or fill out QSL cards. Still other hams think the whole business is a waste of time and avoid 10 Meters completely just so they won't have to deal with any of this silliness.

If you do begin to work 10 Meters frequently, you may want to get a 10-10 number. If so, here's how to do it:

1. Work 10 10-10 members on 10 meters. Log each operator's 10-10 number, call sign, name, and QTH. (Novices only have to collect 5 numbers.)

2. Send the above information to the area coordinator:

   Al Kaiser, N1API

   194 Glen Hills Rd.

   Meriden, CT 06450

3. Include a check for $5 ($4 annual dues + $1 one-time registration fee). The $1 registration fee is waived for Novices, so they only need to pay $4. Make check payable to: 10-10 International Net, Inc. Including SASE or stamps is appreciated but not necessary.

In a week or two, you will receive your number and certificate. The number is yours to trade forever, but you can only participate in official 10-10 sponsored contests if your dues are paid up.

Note that in the literature you receive, you may see the name spelled:

- Ten-ten
- 10-X
- 10X
- 10-10
- 10-Ten
- Ten-10

Rest assured, they all mean the same thing.

As mentioned above, three local 10-10 nets meet each week:

- White Mountain Chapter, Sunday and Wednesday evenings, around 28.317 (*)
- Nor'Easter Chapter, Monday evenings, around 28.706
- Minuteman Chapter, Tuesday evenings, around 28.609

(* I haven't been near my rig for weeks due to a busy schedule, so these times and frequencies may have changed.)

Each of these nets award chapter membership numbers in addition to the basic 10-10 number. You usually have to work something like a dozen members (or one instant qualifier) to become an official member of the net.

The White Mountain Chapter is brand new, so it is very active. This net is VERY heavy into paper chasing. They not only have chapter numbers, but also upgrades and seals and special awards and bonus points and all sorts of bizarre stuff. A "brief" QSO here can take 15 minutes before both parties have accurately copied down all the info they trade. Too weird for me, but if you're into that sort of thing, this net is for you.

The Nor'Easter net is calmer, but they tend to be clustered up in northeast MA, southeast NH, and southern ME. With my modest dipole, I can't hear most of them except through backscatter.

The Minuteman Net is more local and is fairly active. Most stations here fall within the I-495 loop.

All of these nets welcome newcomers with open arms, and that is one of the things I like best about 10 Meters. If you prefer ragchewing to quickie QSO's, or if you need to find a more experienced ham who will take the time to answer a question with patience and understanding, try 10 Meters. A certain easy friendliness persists here which seems to be disappearing from the other bands.

The Beacon Band

The frequencies between 28.2 and 28.3 are populated by dozens of low-power CW beacons, located all over the world. When propagation is low, you won't hear a thing up here. But as soon as the band opens up a little, you will hear beacons from all over. The signals are in Morse Code, and usually follow a format similar to:

E E E E E DE W1XYZ/BCN QTH PLEASANTVILLE, MA E E E E E E

Some messages also include information about the beacon such as the type of antenna used, and the power of the transmitter. The accompanying table lists many of the beacons and their frequencies. Note that some fall outside the 28.2-28.3 limits.

Out of courtesy, most hams avoid conducting QSO's in this segment of 10 Meters.

W1TKZ in QST!

See the field day article in November QST for a write up on the W1TKZ 15A field day operation!! We took second place in the nation in the 15A category. What we won't tell you is that there were only 2 entries in that category.

A Shot in the Dark

from ARNS

extracted by Nels, K1UR

For years it has been believed that light was emitted from an electric light bulb. This has now been proven wrong. This paper proves, without a doubt, that dark sinks into the bulb, giving what we thought was light. This bulb is a dark sink. There are many types and sizes of dark sinks. The largest manufacturers are GE and Sylvania. Some modern dark sinks utilize solid power to operate properly. These power units can be purchased from Eveready, Exide and Mallory. The Dark

Sink Theory proves the existence of dark sinks, and that dark is heavier and faster than light. Some examples follow: There is less dark near the electric bulb than at a distance of 100 feet when it is operating. Therefore, it is sinking dark and can be classified as a dark sink. The larger the dark sink, the greater the distance it can sink dark. The larger the dark sink, the greater its capacity of dark. The dark sink capabilities are evident when the dark sink has reached its capacity and will no longer sink dark. Notice the dark area on the inside portion of the dark sink. The larger the dark sink, the larger the area of dark found within. Dark sinks can be made directional by placing a shield around a portion of the unit or behind it. This will prevent dark from entering the dark sink from that side, thereby extending the range of the dark sink on the unprotected/unshielded side. There is more dark 30 feet from a lit candle than there is at a distance of 3 feet. Proof of its dark sinking capabilities is relatively simple. Examine a new unused candle. Notice that the center is not dark. Ignite the center core and allow it to burn for about five minutes. Notice the lack of dark around the candle. Extinguish the candle flame. Notice that the center core of the candle is now dark. The center core is a dark sink protected by a soft insulator to extend its life expectancy and to maintain rigidity. To verify this, ignite the center core again. Pass a clean pencil over the top, left to right, approximately 3 inches above the center core. Notice there is no dark on the pencil. Do this again approximately one half inch above the center core. Notice that the pencil now has a darkened area. This proves the pencil blocked the path of the dark being drawn to the core of the dark sink. Dark always settles to the bottom of a lake or river. Submerge just below the surface of a lake and you will notice an absence of dark. Lower yourself to 15 feet below the surface and you will notice a degree of darkness even on a sunny bright day. Lower yourself to 50 feet or more below the surface, and you are in total dark. The dark has settled to the bottom, therefore it is heavier than light. Modern technology has allowed us to utilize the dark that has settled to the bottom of large rivers. The dark is passed through turbines which push it down river to the ocean, which has a larger holding capacity for dark and is a common, safe storage location. As the dark is passed through the turbine, a percentage of solid power is removed and transmitted to various short-term storage plants for many uses. Prior to turbines, it was difficult to move the dark from rivers to storage area such as the deep lakes or ocean. The Indians would paddle their canoes very little and not very deeply if they were going in the direction of flow of the dark, so as not to slow it down. If they were traveling opposite the natural flow of dark, they would dig in their paddles very deeply and rapidly to assist the flow of dark to its ocean storage place. If you would open a drawer very slowly, you will notice that the light goes into the drawer. This you can see happen. You cannot see the dark leave the drawer. Continue to open the drawer and the light will continue to enter the drawer, however, you will not see any dark leave the drawer. Therefore dark is faster than light. Go into a closet, close the door and turn off the dark sink. Have a friend open the door about one inch. Your friend will not see any dark leave the closet, nor will you. Have your friend open the door until half the closet is dark and half light. Since two objects cannot occupy the same space at the same time, and you do not feel any change in pressure, by compressing the dark it is logical to assume that dark is faster than light.

Auction

Saturday, November 21, is the date for the Honeywell Bull auction. Auction hours are 11:00 A.M. to 4:00 P.M. and the doors open at 10:00 A.M. for sellers. Honeywell Bull is located at 300 Concord Rd., Billerica, Ma., exit 27 (Concord Rd.) on RTE 3 north from exit 43 RTE 128. Talk-in will be on 147.72/12 and 146.04/64. Sponsors are the Honeywell 1200 RC and the Waltham ARA.

Exams

Nov 2	Acton Boxboro HS Room 6 (By app't only)	John Conover W1QLT 203 Main St. 263-8742 Acton, Ma 01720
Nov 14	Sturdy Memorial Hosp Classroom "B" 211 Park St ATTLEBORO, MASS.	Gary Powers KB1KA Classroom "B" 370 Armistice Blvd Powtucket RI 02861
Dec 1	Acton Boxboro HS Room 6 (By app't only)	John Conover W1QLT 203 Main St. Acton, Ma 01720

Wellesley Amateur Radio Society
Membership Application

Name : Call Sign :

Address : License Class :

City : State : Zip :

ARRL Member? : Phone :

Which club activities do you plan to participate in?

Field Day Flea Market Public Service

Message Fair Simulated Emergency Test Auction

(V)HF Contests (state which ones) : Other :

Do you have any special knowledge, equipment, etc. that could be the subject of a talk at a club meeting?

What do you want out of your club membership?

What are your special areas of interest in Amateur radio?

Can you become available during emergencies requiring communicators?

Please enclose $15.00 dues and $2.00 for each additional family member (please supply names above) or $2.00 for nonsighted persons wishing membership but not wishing to receive the newsletter and mail to :

Wellesley Amateur Radio Society
211 Washington St.
Wellesley, Ma. 02181

Partial List of 10 meter Beacons

Extracted from a list maintained by K2LOG, via WA4DJS;

1/15/87

FREQ	CALL	QTH
28.05	PY2GOB	Sao Paulo, Brazil
28.175	VE3TEN	Ottawa, Canada
28.195	IY4M	Bologna, Italy
28.2	GB3SX	Crowborough, England
28.2	KF4MS	St. Petersburg, FL
28.201	LU8ED	Argentina
28.2025	ZS5VHF	Natal, RSA
28.205	DL0IGI	W. Germany
28.2075	W8FKL	Venice, FL
28.208	WA1IOB	Marlboro, MA
28.210	3B8MS	Mauritius
28.210	K4KMZ	Elizabethtown, KY
28.2125	ZD9GI	Gough Is.
28.215	GB3RAL	Slough, Berkshire
28.215	LU4XL	Cape Horn
28.2175	WB9MVY	Oklahoma City, OK
28.22	5B4CY	Cyprus
28.222	W9UXO	Chicago, IL
28.2225	HG2BHA	Tapolca, Hungary
28.2275	EA6AU	Mallorca,Baleoric Is.
28.23	ZL2MHF	Mt. Climie, NZ
28.232	W7JPI/AZ	Sonoita, AZ
28.2325	KD4EC	Jupiter, FL
28.235	VP9BA	Hamilton, Bermuda
28.2375	LA5TEN	Oslo, Norway
28.24	OA4CK	Lima, Peru
28.2405	5Z4ERR	Kenya
28.2425	ZS1CTB	Capetown, RSA
28.245	A92C	Bahrain
28.2475	EA2HB	Spain
28.248	K1BZ	Belfast, ME
28.25	Z21ANB	Bulawayo, Zimbabwe
28.253	WB4JHS	Greensboro, NC
28.255	LU1UG	Gral Pico, Argentina
28.2575	DK0TE	Arbeitsgen, W. Germany
28.26	VK5WI	Adelaide, SA, Australia
28.262	VK2RSY	Sydney, NSW, Australia
28.264	VK6RWA	Perth, WA, Australia
28.266	VK6RTW	Albany, WA, Australia
28.2685	W9KFO	Eaton, IN
28.27	ZS6PW	Pretoria, RSA
28.27	VK4RTL	Townsville, QLD, Australia
28.2725	9L1FTN	Freetown, Sierra Leone
28.275	AL7GQ	Jackson, MS
28.2775	DF0AAB	Kiel, W. Germany
28.28	YV5AYV	Caracas, Venezuela
28.28	LU8EB	Argentina
28.284	VP8ADE	Adelaide Is., NR Antarctica
28.286	KA1YE	Rochester, NY
28.287	W8OMV	Ashville, NC
28.287	H44SI	Solomon Is.
28.288	W2NZH	Moorestown, NJ
28.29	VS6TEN	Hong Kong
28.2925	LU2FFV	San Jorge, Argentina
28.296	W3VD	Laurel, MD
28.297	WA4DJS	Fort Lauderdale, FL
28.299	PY2AMI	Sao Paulo, Brazil
28.3	ZS1LA	Stillbay, RSA
28.315	ZS6DN	Irene, South Africa
28.888	W6IRT	California
28.89	WD9GOE	Freeburg, IL
28.992	DL0NF	W. Germany

The Spark Gap

WELLESLEY AMATEUR RADIO SOCIETY

211 Washington Street

Wellesley, Ma. 02181

SPECIAL SERVICE CLUB

FIRST CLASS MAIL

WILLIAM HANLON N1ADY
49 VINE STREET
WRENTHAM, MA 02093